PHOTONIC NETWORK NODE

Abstract of the Disclosure

An all optical network node, also known as a photonic node provides a gateway function for multi-vendor and multi-carrier interworking. The basis of this gateway function is the photonic node as 'master' performance monitor and impairment compensator. Performance monitoring in a photonic node supports network wide performance and fault management, and the triggering of network wide protection and restoration options. The photonic node also supports detection and isolation of photonic node specific faults and mis-connects, triggering protection switching to redundant modules where applicable. Advantageously, the performance monitoring drives photonic node output channel power level compensation, and potentially, dispersion compensation. This compensation facilitates a common, transparent, 'zero-impairment', optical gateway space capable of concatenating multi-vendor line systems, and interconnecting multi-carrier networks. A photonic node also includes interfacing with, and leveraging the legacy and electro-optics world. For example, when a photonic is in close proximity to electro-optics systems, network and node monitoring of optical channels can be at least partly done by electro-optic systems.